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ATTORNEYS FOR BASIN ELECTRIC POWER COOPERATIVE

BEFORE THE ENVIRONMENTAL QUALITY COUNCIL STATE OF WYOMING

In the Matter of:)	
Basin Electric Power Cooperative)	Docket No. 07-2801
Dry Fork Station,)	
Air Permit CT – 4631)	

Basin Electric Power Cooperative's Response and Affirmative Defenses to the Protest and Petition for Hearing

Pursuant to the Environmental Quality Council's December 5, 2007 Order, Basin Electric Power Cooperative (BEPC) submits the following Response and Affirmative Defenses to the Protest and Petition for Hearing:

I. Statement of General Facts Supporting the Permit to Construct

The Power Plant: The Dry Fork Station (the Power Plant or DFS) will be a state-of-theart pulverized coal electrical generating plant that will minimize emissions of regulated pollutants and not adversely affect public health or the environment. It will include the most upto-date emission control technology available for control of regulated pollutants. It is subject to emission limits that are among the strictest applicable to other coal-fired electrical generating plants recently constructed or permitted for construction in the United States.

The Need for Electricity: The electricity generated by the Power Plant is essential to meet the rapidly growing need for electricity among consumers in northeast Wyoming. This growing need cannot be met by efficiency measures, electricity demand management, or renewable sources. BEPC thoroughly analyzed its customers' growing demands for electricity and the alternatives for meeting that demand, and determined that the Power Plant is needed to meet that demand.

DEQ's Independent Review: The Wyoming Department of Environmental Quality (DEO) has thoroughly reviewed and analyzed BEPC's application for a permit to construct the Power Plant. DEQ performed its own independent air quality modeling and independent evaluation of emission control technologies, and correctly determined that the Power Plant, as

DEQ permitted it, will comply with all laws, requirements and regulations. DEQ determined the Power Plant will protect the public health and welfare, will utilize the best available emission control technology, and will not cause significant deterioration of existing ambient air quality. The permit conditions and emission limits imposed by DEQ are more stringent in many cases than those initially proposed by BEPC in its application.

Wyoming Air Quality Standards and Regulations provide that no air quality permit to construct a facility shall be issued unless the applicant shows to DEQ's satisfaction that the proposed facility:

- (a) will comply with all rules and regulations of the WDEQ, Division of Air Quality and with the intent of the Wyoming Environmental Quality Act;
 - (b) will not prevent the attainment or maintenance of any ambient air quality standard;
 - (c) will not cause significant deterioration of existing ambient air quality in the region;
 - (d) will be located in accordance with existing land use planning requirements;
 - (e) will utilize the Best Available Control Technology;
 - (f) will have provisions for measuring emissions of significant air contaminants;
 - (g) will achieve the performance specified in the application;
- (h) will not emit any air pollutant in amounts that will prevent attainment or maintenance by any other state of any National Ambient Air Quality Standard; and
- (i) will not interfere with measures required by any other state to prevent significant deterioration of air quality or to protect visibility.

BEPC's permit met all these requirements after DEQ's exhaustive analysis and review.

CO2 Emissions and Global Warming: The permit does not impose limits on CO2 emissions because neither the DEQ nor the Environmental Quality Council (EQC) is empowered to regulate CO2 emissions. DEQ is not authorized in its analysis of emission controls to analyze technologies for reducing CO2 emissions or to impose CO2 emissions limits. If and when federal or state laws are adopted in the future regarding CO2 emissions from facilities such as the Power Plant, BEPC would be obligated to comply with those laws and would comply.

The U.S. Supreme Court in *Massachusetts v. EPA* decided in April 2007 that CO2 is a pollutant and that the EPA potentially has authority to regulate CO2 vehicle emissions under the Clean Air Act. However, the Court remanded to EPA the issue of whether such emissions contribute to global climate change and therefore endanger public health or welfare. If it finds in the affirmative, EPA is required to adopt regulations for vehicle CO2 emissions, although the particulars of such regulation would be up to the agency and no one is able to predict what such regulation might entail. The Supreme Court did **not** rule that permits for facilities such as the Power Plant must regulate CO2 emissions.

Protestants allege that CO2 emissions should be regulated in the permit because the Power Plant will contribute to global warming. However, not only does DEQ lack authority to regulate CO2 emissions, global climate change is not a local issue that can be addressed in a permit for a single 440 Megawatt electrical generating plant. This is an issue of national and international scope that cannot be addressed in this proceeding. Several bills are currently pending before the U.S. Congress to address issues of global climate change, and regional efforts are ongoing as well. Protestants seek to impose their own views on management of CO2 and seek to circumvent the legislative process. Global warming is an issue that should be addressed by the people through their elected representatives, not by interest groups advancing agendas through the judicial system.

The issue in this proceeding is not whether the Power Plant will emit CO2, or how to address global climate change. The issue is whether the permit complies with permitting regulations in Wyoming as they currently exist. Whether to regulate CO2 emissions, what form such regulation might take, and how to address global warming is not and cannot be decided in a vacuum by the EQC, DEQ or BEPC, without legislation and regulations that directs them what to do about these issues.

There is no power plant in the world that is currently capturing and sequestering CO2 emissions on a commercial scale that would prevent such emissions from entering the atmosphere. There is no infrastructure in place that would enable CO2 emissions from the Power Plant to be transported to a sequestration site, even if commercial capture and sequestration facilities were available. EPA is currently investigating what regulatory requirements might be necessary for CO2 sequestration, to prevent underground injection of CO2 from returning to the atmosphere, causing environmental harm, or otherwise creating health or environmental risks; but no regulations for such underground injection have yet been proposed or adopted. There is currently no demonstrated technology for capturing and sequestering CO2 emissions on a commercial scale or federal or state regulations to govern such activities. Protestants' claims that such emissions must be controlled ignores the reality that the means to do that do not yet exist.

Research and development efforts to investigate how to regulate CO2 emissions are underway. BEPC currently is involved in promoting R&D efforts on CO2 capture and sequestration. Its Great Plains Synfuels Plant in North Dakota is the largest coal gasification plant in North America (not an IGCC power plant), used to convert lignite into synthetic natural gas. CO2 from this plant is shipped via pipeline to Canada, where it is used for enhanced oil recovery. BEPC is a member of several organizations such as the Electric Power Research Institute, Plains CO2 Reduction Partnership, Canadian Clean Power Coalition and the Lignite Technology Development Workgroup, that are working to gain a better understanding of CO2 capture and sequestration technologies. BEPC also recently issued a request for proposal to technology providers to develop a CO2 capture demonstration project at the company's Antelope Valley Station. The Dry Fork Station Power Plant is not, however, an R&D project, and therefore is not a feasible site for research or pilot testing of CO2 capture or sequestration. The Power Plant must be a highly reliable, highly dependable commercial source of electricity to meet the critical growing demand for electric power in northeast Wyoming. The permit to construct the Power Plant is not an appropriate vehicle to advance the study of global climate change or the development of carbon capture and sequestration technologies.

Effect on Public Health: The Power Plant will not adversely affect public health or welfare. Protestants do not even allege the Power Plant will cause violations of National Ambient Air Quality Standards (NAAQS), which are the health-based limits on concentration of SO2, NOx, CO, VOCs, particulate matter and lead in the ambient air that are set at conservative levels to ensure protection of public health with an additional margin of safety. In fact, as BEPC's and DEQ's own air quality modeling demonstrated, the Power Plant's emissions will be well below the NAAQS and well below the even lower, more protective PSD increments, thus ensuring that air quality in Wyoming will be protected, and the Power Plant will not cause significant deterioration. As a result of DEQ's careful review and reliance on conservative air quality modeling assumptions, public health and welfare in Wyoming will be protected.

II. Jurisdiction over Protestants' Appeal and Standard of Review

As more fully explained in BEPC's Motion to Dismiss, Protestants confuse the EQC's general authority to hold a hearing with a permit protestant's right to have such a hearing. Here, Protestants have no statutory right under the Environmental Quality Act to file an appeal to the Council because, under Wyoming statutes, Petitioners' statutory remedy for review of the Permit is before the courts, not the EQC.

DEQ spent almost two years undertaking a lengthy and exhaustive analysis of the proposed Power Plant, the available complex emission control technologies, and the impact of the Power Plant on air quality standards and visibility. The proposed permit included both DEQ's detailed analyses of what is best available control technology and DEQ's modeling of the impacts of the proposed Power Plant on air quality. DEQ's proposed permit was sent out for public review and comment. Dozens of parties submitted comments considered by DEQ, and a public hearing was held. All comments and testimony were considered by DEQ before the DEQ Director made his final decision to grant the Permit. The issuance of the Permit by the Department was final agency action and the terms of the Permit are not authorized by law to be determined or reviewed in a contested case agency proceeding.

To the extent the EQC determines that Protestants may appeal the permit despite the Environmental Quality Act, any review of the permit by the EQC should be limited to the existing record, to determine if the DEQ made any legal error or abused its discretion. The final determination by the DEQ on the Permit is entitled to substantial deference, whether in an appeal before the court or before the Council.

III. Responses to Allegations

- 1. BEPC admits the allegations of paragraph 1.
- 2. BEPC admits the allegations of paragraph 2.
- 3. The allegations of paragraph 3 are not relevant to the issuance of the permit for the Dry Fork Station DEQ has neither authority nor responsibility to include conditions in the permit regarding greenhouse gases. The Draft Environmental Impact Statement speaks for itself and no response is required, but to the extent paragraph 3 attempts to characterize this document BEPC denies such characterization. BEPC lacks sufficient knowledge and information to admit or deny that greenhouse gases contribute to global warming, and on that basis denies this

allegation. In *Massachusetts v. EPA*, the U.S. Supreme Court held that CO2 is a pollutant under the Clean Air Act but remanded the case to the EPA to determine whether greenhouse gases contribute to global warming. EPA has not yet made that determination.

- 4. Respecting paragraph 4, the permit for the DFS speaks for itself and no response is required. The emission limits in the permit represent residual emissions after the application of Best Available Control Technology, and are among the most stringent limits applicable to any coal fired power plant recently constructed or permitted in the U.S.
- The allegations of paragraph 5 are not relevant to the issuance of the permit for the DFS. The IPCC reports and "other scientific studies" speak for themselves and no response is required, but to the extent Protestants seek to characterize such reports and studies, BEPC denies such characterization. BEPC admits that the DFS will emit greenhouse gases and that coal-fired power plants are a source of CO2 emissions. BEPC lacks sufficient knowledge and information to respond to the alleged consequences of global warming, including environmental, health, economic and ecological impacts, drought, flooding, extreme weather events, infectious diseases and species extinction, and on that basis denies such allegations. BEPC otherwise denies the allegations of paragraph 5, and specifically denies that the DFS will make a significant contribution to global warming. Neither DEQ nor the EQC has authority or responsibility to regulate CO2 emissions or other greenhouse gas emissions at this time. Although the U.S. Supreme Court decided in April of 2007 that CO2 emitted by vehicles is a pollutant under the Clean Air Act, it did not decide that such emissions must be regulated but rather remanded the case back to the EPA to decide whether such emissions contribute to global warming and therefore should be regulated. The U.S. Congress presently is considering several bills regarding global climate change, but no one knows what will emerge from the Congress. There is currently no demonstrated technology for capturing and sequestering CO2 emissions on a commercial scale or federal or state regulations to govern such activities.
- 6. BEPC admits that EPA has determined that PM10 and PM2.5 have been linked to adverse health impacts and, as a result, EPA has set conservative, protective NAAQS for PM10 and PM2.5 such that emissions resulting in concentrations below the NAAQS levels will not adversely impact public health. BEPC admits that coal mining may to some extent contribute to ambient levels of particulate matter at some locations in the vicinity of Gillette. BEPC lacks sufficient knowledge and information to admit or deny that PM10 standards were exceeded and on that basis denies this allegation. BEPC admits that the DFS may emit particulate matter, up to permitted levels, and otherwise denies the allegations of paragraph 6. BEPC denies that emissions of particulate matter or other pollutants from the DFS will contribute to health risks. Protestants have not alleged that the DFS will violate health-based NAAQS, and in fact the DFS will not cause violations of any NAAQS. NAAQS are set at levels that will protect public health and welfare with a margin of safety. Air quality modeling of DFS impacts on ambient concentrations of PM10 show that the impacts will not exceed significance levels, and confirms that DFS will fully comply with all air quality standards.
- 7. BEPC admits that the DFS will emit SO2 and NOx and that some SO2 and NOx emissions have a potential to contribute to acid rain and impact visibility, and otherwise denies the allegations of paragraph 7. DFS emissions meet all acid rain regulatory requirements. Emissions of SO2 and NOx will not cause violations of any NAAQS, and Protestants have not

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alleged that the DFS will violate health-based NAAQS. BEPC denies that DFS emissions will adversely impact visibility in the Northern Cheyenne Indian reservation, Badlands National Park, or Wind Cave National Park. BEPC and DEQ conducted air quality modeling with conservative assumptions that demonstrated that DFS would not adversely impact visibility in Class I areas.

- 8. The allegations of paragraph 8 are not relevant to this proceeding; the only relevant issue regarding mercury is whether the DFS permit complies with any applicable regulation concerning mercury. BEPC admits that coal-fired power plants emit mercury, and the DFS permit limits mercury emissions to levels consistent with federal and state law. BEPC otherwise lacks sufficient knowledge and information to admit or deny the allegations of paragraph 8, and on that basis denies such allegations.
- 9. BEPC denies the allegations of paragraph 9. The permit for the Dry Fork Station complies with all applicable legal and regulatory requirements and environmental standards, and will not have adverse effects on members of the Protestants.
- 10. BEPC lacks sufficient knowledge and information to admit or deny the allegations of paragraph 10, and on that basis denies such allegations.
- 11. BEPC lacks sufficient knowledge and information to admit or deny the allegations of paragraph 11, and on that basis denies such allegations.
- 12. BEPC lacks sufficient knowledge and information to admit or deny the allegations of paragraph 12, and on that basis denies such allegations.
- 13. BEPC admits that Protestants submitted written comments on the draft permit to construct for the DFS and that a representative of the Powder River Basin Resource Council and a representative of the Sierra Club testified at the public hearing on the draft permit. Such comments were considered fully by DEQ before it issued the final permit. BEPC admits Protestants commented on the DEIS prepared by the RUS. BEPC otherwise lacks sufficient information or belief to either admit or deny the allegations of paragraph 13, and on that basis denies such allegations. The permit to construct complies fully with all applicable laws, regulations and requirements, and the DFS will not harm public health or welfare.
- 14. BEPC denies the first, fourth, sixth and ninth sentences of paragraph 14; and lacks sufficient knowledge and information to admit or deny the second, third, seventh and eighth sentences and on that basis denies such allegations. Respecting the fifth sentence, BEPC lacks sufficient knowledge and information to admit or deny the allegation that members of Protestants regularly visit Class I areas, and on that basis denies such allegations; and BEPC otherwise denies the allegations of this sentence. The permit to construct the DFS complies fully with all applicable laws, regulations and requirements, and the DFS will not adversely affect public health or welfare.
- 15. The allegations of paragraph 15 are not relevant to this proceeding. Neither DEQ nor the EQC has authority or responsibility to regulate global warming. Global warming is being debated and considered by the U.S. Congress, and it is premature to anticipate what might emerge from the Congress; and neither the commercial scale technology nor the regulatory structure to accomplish greenhouse gas capture and sequestration exists at this time. BEPC lacks

sufficient knowledge and information to admit or deny the allegation that members of Protestants farm and irrigate their land, and on that basis deny such allegations. BEPC otherwise denies the allegations of paragraph 15.

- 16. BEPC admits that in 1977 Congress added language to the Clean Air Act that eventually formed the basis for the PSD program. The legislation speaks for itself and no response is required, but to the extent Protestants seek to characterize such legislation, BEPC denies such characterization. BEPC otherwise denies the allegations of paragraph 16.
- 17. The statutes referred to in paragraph 17 speak for themselves and no response is required, but to the extent Protestants seek to characterize the statutes, BEPC denies such characterization.
- 18. The statutes and regulations referred to in paragraph 18 speak for themselves and no response is required, but to the extent Protestants seek to characterize the statutes and regulations, BEPC denies such characterization.
- 19. BEPC admits that Wyoming has an approved SIP that includes approved PSD regulations, which are administered by the DEQ. Otherwise, the statutes and regulations referred to in paragraph 19 speak for themselves and no response is required, but to the extent Protestants seek to characterize such statutes and regulations, BEPC denies such characterization.
- 20. The regulations referred to in paragraph 20 speak for themselves and no response is required, but to the extent Protestants seek to characterize such regulations, BEPC denies such characterization. The permit to construct the DFS includes all terms and conditions required under all applicable federal and state laws and regulations, and therefore DEQ has a statutory duty to issue the permit.
- 21. The regulation and quoted language referred to in paragraph 21 speak for themselves and no response is required, but to the extent Protestants seek to characterize such regulation, BEPC denies such characterization.
 - 22. BEPC denies the allegations of paragraph 22.
- 23. BEPC denies the allegations of paragraph 23. DEQ fully considered Protestants' comments regarding greenhouse gases and correctly concluded that it has neither the authority nor the responsibility to limit greenhouse gas emissions from the DFS.
- 24. The statutes and regulations referred to in paragraph 24 speak for themselves and no response is required, but to the extent Protestants seek to characterize such statutes and regulation, BEPC denies such characterization.
- 25. The statutes and regulations referred to paragraph 25 speak for themselves and no response is required, but to the extent that Protestants seek to characterize such statutes and regulations, BEPC denies such characterizations. BEPC further denies the third sentence of paragraph 25, denies that pollutants "subject to regulation" include pollutants not actually regulated, denies that CO2 or other greenhouse gases are regulated at this time, and further denies that DEQ has authority or responsibility to include limits on CO2 or other greenhouse gas

emissions in the permit to construct the DFS. If greenhouse gas emissions are to be regulated in the future, such legislation must come from the U.S. Congress or the Wyoming Legislature.

- 26. The U.S. Supreme Court case and the statute referred to in paragraph 26 speak for themselves and no response is required, but to the extent Protestants seek to characterize such case and statute BEPC denies such characterization. *Massachusetts v. EPA*, decided in April 2007, held that CO2 is a pollutant and that the EPA potentially has authority to regulate CO2 *vehicle* emissions under the Clean Air Act. However, the issue of whether EPA is required to adopt regulations for vehicle CO2 emissions was remanded by the Court back to EPA, for EPA to decide whether such emissions contribute to global climate change and therefore endanger public health or welfare. If it finds in the affirmative, EPA is bound to regulate vehicle CO2 emissions, although the particulars of such regulation would be up to the agency and no one is able to predict what such regulation might be. The Supreme Court did **not** rule that permits for facilities such as the Power Plant must regulate CO2 emissions.
- 27. The statutes and regulations referred to in paragraph 27 speak for themselves and no response is required, but to the extent Protestants seek to characterize such statutes and regulations, BEPC denies such characterization. BEPC denies that CO2 has ever been or now is subject to regulation under the Clean Air Act's acid rain program or any other provision of the Clean Air Act. Longstanding EPA interpretations, policy and guidance have held that CO2 is not subject to regulation under the Clean Air Act.
- 28. BEPC denies the allegations of paragraph 28. Neither DEQ nor the EQC has authority or responsibility to regulate CO2 emissions or other greenhouse gas emissions at this time, to conduct a BACT analysis for greenhouse gases, or to set permit limits for greenhouse gases. Although the U.S. Supreme Court decided in April of 2007 that CO2 emitted by vehicles is a pollutant under the Clean Air Act, it did not decide that such emissions must be regulated but rather remanded the case back to the EPA to decide whether such emissions contribute to global warming, and therefore should be regulated. EPA has not yet done so. The U.S. Congress presently is considering several bills regarding global climate change, but no one knows what will emerge from the Congress. It would be premature for either DEQ or the EQC to try to predict what Congress will do and build such predictions into the DFS permit. There is currently no demonstrated technology for capturing and sequestering CO2 emissions on a commercial scale or federal or state regulations to govern such activities.
- 29. The regulation referred to in paragraph 29 speaks for itself and no response is required, but to the extent Protestants seek to characterize such regulation BEPC denies such characterization. BEPC otherwise denies the allegations of this paragraph, and denies that collateral environmental impacts of greenhouse gas emissions must be considered in setting BACT limits for the DFS.
- 30. The allegations of paragraph 30 are not relevant to this proceeding; there is no authority under the law to require BEPC or any permit applicant to speculate regarding the potential for future regulation of CO2 or carbon emissions, or take such speculative possibility into account in the BACT analysis for the DFS or any other facility. BEPC denies that the collateral costs of future carbon regulation must be considered in setting BACT limits for the DFS. BEPC currently is involved in promoting R&D efforts on CO2 capture and sequestration.

Its Great Plains Synfuels Plant in North Dakota is the largest coal gasification plant in North America (not an IGCC power plant), used to convert lignite into synthetic natural gas. CO2 from this plant is shipped via pipeline to Canada, where it is used for enhanced oil recovery. BEPC also recently issued a request for proposal to technology providers to develop a CO2 capture demonstration project at the company's Antelope Valley Station. The DFS is not, however, an R&D project; BACT requires use of "available technology" not research or pilot testing of CO2 capture or sequestration technologies.

- 31. The statute referred to in paragraph 31 speaks for itself and no response is required, but to the extent Protestants seek to characterize such statute, BEPC denies such characterization. BEPC otherwise denies the allegations of paragraph 31.
- 32. BEPC denies the allegations of paragraph 32. Interested parties, including Protestants, were provided a full opportunity to comment on any and all issues related to the proposed permit to construct for the DFS, including but not limited to alternatives and control technology requirements.
- 33. BEPC admits that the permit to construct the DFS authorizes construction of a subcritical boiler, and otherwise denies the allegations of paragraph 33. DEQ required BEPC to explain the selection of a subcritical boiler rather than a supercritical or ultrasupercritical boiler, and BEPC provided a full explanation. A subcritical boiler is an appropriate technology for the DFS, and the permitting of a subcritical boiler complies fully with all legal and regulatory requirements.
- 34. The regulation cited in the first sentence of paragraph 34 speaks for itself and no response is required, but to the extent Protestants seek to characterize such regulation, BEPC denies such characterization. BEPC denies the second sentence of paragraph 34 as it applies to the DFS. Substitution of a supercritical or ultrasupercritical boiler for the subcritical boiler at the DFS would be a fundamental redesign and redefinition of the project and therefore would not constitute BACT for control of pollutants from the DFS. Supercritical units have seldom been used for boilers smaller than 500 MW, and boilers below that size are not readily commercially available. The analysis performed by BEPC's engineering consultant and independently reviewed and accepted by DEQ estimated that, considering all factors, a supercritical unit would not provide a net efficiency gain for a unit the size of the DFS boiler, and would cost more to construct. Therefore, at DFS, a supercritical unit is not only a redesign and redefinition of the project, it is not the Best Available Control Technology.
- 35. The allegations of paragraph 35 are not relevant to this proceeding. Whether or not supercritical boiler technology might be applicable to units at larger facilities, it is not applicable to the DFS and would constitute an impermissible redefinition of the DFS project, not a control technology, and therefore does not need to be considered in the BACT analysis. BEPC denies the allegations of paragraph 35 to the extent such allegations are directed at the DFS. BEPC denies that a supercritical or ultra-supercritical unit would be more efficient at the DFS, given the size of the DFS boiler, and further denies that such units are readily available in the size of the DFS boiler. A supercritical or ultra-supercritical unit would not result in greater efficiency at the DFS, would not result in lower emissions, and does not represent BACT for the DFS.

- 36. BEPC denies the allegation of paragraph 36. DEQ required BEPC to explain its selection of subcritical technology instead of supercritical or ultra-supercritical technology, and BEPC provided an evaluation by its engineering consultant that fully explained the reasons for that selection.
- 37. BEPC denies the allegations of paragraph 37. IGCC would be a fundamental redefinition and redesign of the pulverized coal unit to be built at the DFS and therefore installation of IGCC instead of a pulverized coal boiler cannot be required as BACT or as a condition of the permit.
- 38. The regulation referred to in the first sentence of paragraph 38 speaks for itself and no response is required, but to the extent Protestants seek to characterize such regulation, BEPC denies such characterization. BEPC denies the allegations of the second sentence of paragraph 38.
- 39. The allegations of paragraph 39 are not relevant to this proceeding; IGCC would be a fundamental redefinition and redesign of the pulverized coal unit to be built at the DFS and therefore installation of IGCC instead of a pulverized coal boiler cannot be required as BACT or as a condition of the permit. BEPC denies the allegations of paragraph 39. IGCC has not been commercially demonstrated to be cleaner than pulverized coal technology, or to have lower emissions, and is not demonstrated to have sufficient availability or an adequate capacity factor to meet the needs of BEPC's customers for baseload electrical power in northeast Wyoming. There has been no commercial scale demonstration of CO2 capture or sequestration from an IGCC plant. Technologies for capture of CO2 emissions from pulverized coal plants are currently in the research and development phase. EPA is investigating possible regulations to govern sequestration of CO2 by underground injection, but has not completed its investigation or proposed regulations to protect the public and the environment from adverse impacts of underground injection. If reduction or control of CO2 emissions from the generation of electricity is required in the future, it is not known whether IGCC will be proven to be a superior technology for facilitating CO2 capture and sequestration, or what alternative technologies might be available.
- 40. The allegations of paragraph 40 are not relevant to this proceeding; IGCC would be a fundamental redefinition and redesign of the pulverized coal unit to be built at the DFS and therefore installation of IGCC instead of a pulverized coal boiler cannot be required as BACT or as a condition of the permit. BEPC denies the first sentence of paragraph 40. Respecting the second sentence, BEPC denies that there are more than 2 IGCC plants in the U.S. using coal as a fuel to generate electricity on a commercial scale, and otherwise lacks sufficient knowledge and information to admit or deny the allegations of such sentence, and on that basis denies such allegations. To the extent IGCC plants may be in operation, many if not most of them do not use coal to generate electricity. There are no commercial IGCC plants in the world that use subbituminous coal exclusively as the DFS is designed to do, and none operating at an elevation similar to the DFS, more than 4,500 feet above sea level. IGCC has not been demonstrated to have sufficient availability or adequate capacity to meet the needs of BEPC's customers for baseload electrical power in northeast Wyoming.

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- 41. BEPC admits that it conducted an evaluation of IGCC as an alternative to a pulverized coal unit, using an equivalent BACT format, and otherwise denies the allegations of paragraph 41. The DEQ considered IGCC in its analysis, specifically discussed IGCC in its responses to comments, attached BEPC's evaluation of the IGCC alternative to its responses to comments, and correctly concluded that IGCC would be a redefinition of the proposed pulverized coal plant, an entirely different technology for generating electricity rather than a control technology, and that permit applicants are not required to fundamentally redefine or redesign their project as part of the BACT analysis.
- 42. The regulation referred to in paragraph 42 speaks for itself and no response is required, but to the extent Protestants seek to characterize such regulation, BEPC denies such characterization.
- 43. BEPC denies the allegations of paragraph 43 and further denies that BACT is defined solely as the "maximum degree of reduction" that can be achieved. The NOx and SO2 limits in the DFS permit are BACT for that facility, and represent limits that are among the strictest applicable to recently constructed or permitted coal-fired power plants in the United States.
- 44. The statute referred to in paragraph 44 speaks for itself and no response is required, but to the extent Protestants seek to characterize such statute, BEPC denies such characterization. BEPC otherwise denies the allegations of paragraph 44. The permit to construct for the DFS contains multiple limits on NOx and SO2 emissions, including annual limits, 12-month rolling limits, 30-day rolling limits, and as to SO2, a 3-hour block limit. These limits fully meet the requirements for BACT.
- 45. BEPC admits that the final permit for the DFS contains 30-day rolling limits for NOx and SO2 and a 3-hour block limit for SO2, denies that these averaging times were added in response to adverse comments (they were in the draft permit), and otherwise denies the allegations of paragraph 45. The limits in the DFS permit must be complied with on a continuous basis, and intermittent compliance is not authorized. Nothing in the definition of or requirements for BACT requires that limits be expressed in units of lb/MMBtu on a short term basis, or include control efficiency values. The SO2 and NOx limits in the DFS permit comply fully with all BACT requirements.
- 46. BEPC denies the allegations of paragraph 46. Respecting the second sentence, BEPC states that wet scrubbing technology was fully considered in BEPC's and the DEQ's BACT analyses, correctly concluding that Circulating Dry Scrubber Technology constitutes BACT for the DFS.
- 47. The allegations of paragraph 47 are not relevant to this proceeding because no adverse impacts on air quality related values in Class I areas are alleged. BEPC admits that control of SO2 emissions to meet NAAQS, PSD increments, and all air quality standards, is important, and otherwise denies the allegations of paragraph 47. The SO2 limits in the DFS permit represent a state-of-the-art level of control, making the DFS SO2 emissions among the most stringent applicable to any recently constructed or permitted coal-fired power plant in the

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- U.S. Modeling of the impacts of emissions from the DFS on Class I areas demonstrates that DFS will not adversely impact visibility in Class I areas.
- 48. The allegations of paragraph 48 are not relevant to this proceeding. The only relevance of mercury to this proceeding or the DFS permit is whether the DFS permit complies with any applicable regulation concerning mercury. BEPC admits that coal-fired power plants emit mercury, and the DFS permit limits mercury emissions to levels consistent with federal and state law. BEPC lacks sufficient knowledge and information to admit or deny the allegations of paragraph 48, and on that basis denies such allegations.
- 49. The SIP referred to in paragraph 49 speaks for itself and no response is required, but to the extent Protestants seek to characterize the SIP, BEPC denies such characterization. BEPC otherwise denies the allegation of this paragraph and denies that the Wyoming BACT standard for mercury mandates the "maximum degree of reduction achievable".
- 50. BEPC denies the allegations of paragraph 50. In addition to imposing an enforceable mercury limit consistent with the Clean Air Mercury Rule, the DFS permit requires installation and operation of a mercury emission control system at startup of the plant, and a one-year optimization study of emission controls to determine what lower limit might be met by the control system that is determined to be optimal. This fully meets the Wyoming state-only requirement for BACT for mercury.
- 51. BEPC admits that the DFS permit requires a one-year mercury optimization study with a target of 0.000020 lb/MW-hr, and otherwise denies the allegations of paragraph 51. The permit imposes an immediately enforceable mercury emission limit consistent with the Clean Air Mercury Rule, and installation and operation of a mercury emission control system when the plant begins operation, together with a one-year mercury control optimization study.
- 52. BEPC denies the allegations of paragraph 52. The "top-down" approach is not mandatory even for federal regulatory purposes, and certainly is not required for state-only mercury BACT purposes—the DEQ's interpretation and application of this state-only rule is reasonable and entitled to deference. As explained fully by DEQ, there will be no delay in the installation or operation of mercury control technology. Only the determination of what limit will be achievable by the mercury control technology has been deferred, pending data as it becomes available. DEQ has correctly determined that this is consistent with the Wyoming statute, and it is also consistent with applicable federal authorities.
- 53. BEPC admits that sorbent injection might be a control technology to be considered during the one-year optimization study, and otherwise denies the allegations of paragraph 53. Nothing in the permit precludes consideration of sorbent injection, and nothing precludes consideration of other control technologies. In the absence of data, there is no basis for prejudging what the appropriate technology might be or what emission levels might be achievable with such technology. Nothing in Wyoming or federal law requires inclusion of a percentage removal requirement. BEPC has agreed that sorbent injection will be considered if necessary to obtain adequate mercury removal.

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- 54. BEPC admits the first two sentences of paragraph 54; admits that some components of PM10 can pose health risks above certain concentration levels, averaged over certain times; and otherwise denies the allegations of this paragraph. Emissions of particulate matter from the DFS will not result in concentrations of PM10 in the ambient air that cause adverse health or welfare effects. Such emissions have been conservatively modeled to be below not just the NAAQS and PSD increment levels, but below even the EPA-defined significant impact levels.
- 55. BEPC admits the first sentence of paragraph 55. The regulations referred to in paragraph 55 speak for themselves and no response is required, but to the extent Protestants seek to characterize such regulations, BEPC denies such characterization.
 - 56. BEPC admits the allegations of paragraph 56.
- 57. BEPC admits that condensable PM10 will be emitted by the DFS, and otherwise denies the allegations of paragraph 57. There are significant uncertainties regarding emission factors to estimate emissions of condensable PM10, and the available methods for measuring stack emissions of condensable PM10 are subject to significant inaccuracies. Both of these facts are reasons not to include permit limits on condensable PM10. Additionally, as determined by DEQ and supported by the Environmental Appeals Board in *In re Newmont Nevada Energy Investment, LLC, TS Power Plant*, 12 E.A.D. 429 (EAB 2005), because there are no control technologies that can control condensable particulate emissions, it is not feasible or necessary to include a BACT limit for condensable PM10. DEQ further determined that the permit contains BACT limits for sulfuric acid mist and fluoride, which constitute the majority of condensable PM10 emissions. These emission limits will act as reasonable surrogates for limiting condensable PM10 emissions, in light of the problems with estimating and measuring condensable PM10 and the lack of control technologies for condensable PM10.
- 58. Respecting paragraph 58, BEPC admits that EPA, in its comments on the draft permit, recommended a CEMS for PM10. EPA's Draft New Source Review Workshop Manual (non-binding guidance) speaks for itself and no response is required, but to the extent Protestants seek to characterize this Manual, BEPC denies such characterization. BEPC otherwise denies the allegations of paragraph 58. As DEQ determined, neither federal nor state regulations require CEMS for particulate matter. CEMS for particulate matter are not yet sufficiently advanced to provide reliable and accurate information. The DFS boiler will be equipped with a continuous opacity monitor, which is an adequate surrogate for PM10 monitoring. The Environmental Appeals Board in *In re Newmont Nevada Energy Investment*, 12 E.A.D. at 429 concurred that, although PM10 CEMS may become standard in the future, it was acceptable for the Nevada agency to conclude that this technology currently is not advanced enough to provide reliable and accurate information, and that a continuous opacity monitor (which is required in the DFS permit) is an acceptable surrogate for direct PM10 monitoring. The EAB found that there is no current legal requirement that a CEMS for PM10 be installed on a new coal-fired boiler.
- 59. BEPC admits that EPA promulgated a specification for PM CEMS, but denies that a PM CEMS can in fact measure PM emissions reliably and accurately at the DFS, and otherwise denies the allegations of this paragraph.

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- 60. The statute referred to in the first sentence of paragraph 60 speaks for itself and no response is required, but to the extent Protestants seek to characterize this statute, BEPC denies such characterization. BEPC otherwise denies the allegation of paragraph 60 and denies that the Permit violates section 110(j) of the Clean Air Act. As determined by the Environmental Appeals Board, the continuous opacity monitoring required in the DFS permit, coupled with requirements for stack testing, will adequately demonstrate compliance with the permit limits for PM10.
- 61. The allegations of paragraph 61 are not relevant to this proceeding. Because EPA has not adopted rules for implementing PM2.5 requirements for PSD permitting, PM2.5 is not pertinent to this permit. BEPC admits that EPA has determined PM2.5 can have adverse health effects, but only at ambient concentrations that exceed the NAAQS, and otherwise denies the allegations of paragraph 61.
- 62. The allegations of paragraph 62 are not relevant to this proceeding. Because EPA has not adopted rules for implementing PM2.5 requirements for PSD permitting, PM2.5 is not pertinent to this permit. The EPA final rule speaks for itself and no response is required, but to the extent Protestants seek to characterize the NAAQS, BEPC denies such characterization. BEPC admits that the EPA relied on numerous scientific studies and research in deciding that the 2006 NAAQS for PM2.5 are protective of public health and welfare with a margin of safety. BEPC otherwise denies the allegations of paragraph 62.
- 63. The regulations referred to in paragraph 63 speak for themselves and no response is required, but to the extent Protestants seek to characterize such regulations, BEPC denies such characterization.
- 64. BEPC denies the allegations of paragraph 64. Pursuant to EPA guidance, PM10 is to be used as a surrogate for PM2.5, pending adoption of final EPA regulations regarding PSD requirements for PM2.5. EPA proposed regulations regarding PSD requirements for PM2.5 on September 21, 2007, but the proposed regulations have not been finalized and were not finalized when the DFS permit was issued. PM10 emissions, which include all PM2.5 emissions, were modeled for compliance with the PM10 NAAQS, and the modeling showed that the maximum 24-hour ambient PM10 concentration was 4.2 micrograms per cubic meter, which is well below the 35 micrograms per cubic meter 24-hour PM2.5 NAAQS and demonstrates, notwithstanding the absence of any legal obligation to do so, that ambient concentrations of PM2.5 attributable to the DFS will be far below the level of the new PM2.5 NAAQS.
- 65. BEPC denies the allegations of paragraph 65. There are no regulations at this time governing PSD requirements for PM2.5. In the meantime, PM10 is an adequate surrogate for PM2.5 for PSD permitting and, pursuant to EPA guidance, PM10 is to be used as a surrogate for PM2.5 until such regulations are adopted. That is what the DFS permit properly does.
 - 66. BEPC denies the allegations of paragraph 66.
- 67. Respecting paragraph 67, Wyoming law speaks for itself and no response is required, but to the extent Protestants seek to characterize Wyoming law, BEPC denies such characterization.

- 68. BEPC denies the allegations of paragraph 68. Air quality modeling that is consistent with all applicable regulations and modeling requirements demonstrates that the DFS will not cause or contribute to violations of applicable SO2 increments. All increment-consuming sources identified by the states of Wyoming, Montana, North Dakota and South Dakota were included in the modeling.
- 69. BEPC denies the allegations of paragraph 69. Significant Impact Levels have been widely used and accepted by air regulatory agencies, including the EPA and DEQ, to define what constitutes a de minimis level of emissions such that further analysis or modeling is not required to ensure that the project will not adversely impact the NAAQS or PSD increment levels. The use of Significant Impact Levels is consistent with applicable laws and regulations.
- 70. Respecting paragraph 70, no response is required, but there is no authority for Protestants to reserve the right to raise issues that are not raised in its Protest and Petition for Hearing.
- 71. Respecting paragraph 71, no response is required, but there is no authority for Protestants to reserve the right to amend their Protest and Petition for Hearing.
- 72. Respecting paragraph 72, no response is required, although BEPC notes that the Protestants may not reserve any right contrary to law, regulation and orders of the EQC.
- 73. Respecting paragraph 73, no response is required, although BEPC respectfully asserts there is no authority for Protestants to request a contested case hearing in this matter, and there is no need for a contested case hearing in this matter to rehash the lengthy process by DEQ leading to the permit granted by the Director, which constitutes the final agency action on the permit application.

Protestants' Requested Relief:

- 1. Protestants have no statutory authority to request a stay of the permit and should be required to articulate whatever authority they claim gives the EQC the ability to stay final agency action on the permit to construct. A stay of this permit is neither authorized nor sensible under the circumstances of a final permit that authorizes construction to commence.
- 2. Protestants have no statutory authority to request the EQC to vacate and remand the permit.
- 3. Protestants have no statutory authority to request the EQC's review of this permit, and their appeal rights by statute were to the courts.

General Denial: To the extent not otherwise admitted, any allegations in the Protest, including Headings and Subheadings and including any legal conclusions to which no response is required, are denied.

IV. Affirmative Defenses

- 1. Protestants have no right to a hearing before the EQC or to file their Protest and Petition for Hearing with the EQC. Their exclusive right to appeal, protest, challenge or seek review of the permit to construct for the DFS is to seek judicial review.
- 2. The issuance of the permit to construct for the DFS is final agency action by DEQ and the Air Quality Division. Protestants' exclusive right to contest, challenge, protest, appeal or seek review of such final action is to seek judicial review. Protestants have no right to request a stay of the permit, to request the EQC to vacate or revoke or take other action on the permit, or to request a contested case hearing in this matter.
- 3. Because Protestants' have no right to a hearing before the EQC, and because their exclusive remedy is to seek judicial review of the permit to construct, the EQC lacks jurisdiction to hear Protestants' Protest and Petition for Hearing.
- 4. Protestants' members are not aggrieved parties within the meaning of W.S. 35-11-103(a)(vii). They have not alleged damages that they will sustain, nor will they sustain damages, because of their "unique position" in this proceeding.
- 5. Protestants' members will not be adversely affected by the issuance of the DFS permit to construct or the operation of the DFS, and therefore Protestants lack standing to file or pursue their Protest and Petition for Hearing or obtain review of the permit.
- 6. Protestants fail to state a claim on which relief may be granted. Even if Protestants would have a right to a hearing before the EQC, they would be entitled to relief only if they could prove that in issuing the permit the DEQ committed legal error or otherwise was clearly erroneous in its evaluation.
- 7. The terms and conditions of the permit to construct for the DFS fully comply with all applicable federal and state statutes, regulations and requirements; therefore BEPC was entitled to have the permit issued and is entitled to rely on that permit as final agency action in constructing the DFS.
- 8. BEPC has the right and obligation to construct the DFS pursuant to the permit. The permit to construct is a property right of BEPC, and a stay, modification, or revocation of the permit by the EQC would be a denial of BEPC's substantive due process rights.
- 9. BEPC reserves the right, consistent with the Environmental Quality Act, the DEQ Rules of Practice and Procedure, and orders of the EQC, to raise any additional affirmative defenses as necessary.

DATED December 21, 2007.

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ATTORNEYS FOR BASIN ELECTRIC POWER

COOPERATIVE

CERTIFICATE OF SERVICE

I hereby certify that on December 21, 2007, I served the foregoing by placing a true and correct copy thereof in the United States mail, postage prepaid and properly addressed to the following:

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